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ABSTRACT

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This publication provides the results of cooperative research among the U.S. Department of Agriculture and certain state universities in the 1991 Uniform Peanut Performance Tests. These tests evaluate the adaptability of advance peanut breeding lines in the major peanut-producing states: Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia. Included are summaries of yields and market grades from the peanut performance tests and also summaries on planting, harvesting, soil type, soil analyses, mineral amendments, rainfall, irrigation, and pesticides.

Keywords: *Arachis hypogaea* L., groundnut, yield, market grade, fatty acids, iodine value

Mention of trade names, commercial products, or companies in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture over others not mentioned.

Listing of yield performance in this publication is solely for the purpose of providing specific information and is not a recommendation of a cultivar by the U.S. Department of Agriculture or by a cooperating state experiment station. Recommendations of cultivars for specific geographic adaptation and cultural management are made in some states by the Cooperative Extension Service.

While supplies last, single copies of this publication may be obtained at no cost from Dr. Terry A. Coffelt, USDA–ARS, P.O. Box 7099, Suffolk, VA 23437.

Copies of this publication may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

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Uniform Peanut Performance Tests 1991

in cooperation with State Agricultural Experiment Stations in Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia

Terry A. Coffelt, Editor

Uniform Peanut Performance Tests 1991

To evaluate potential new peanut cultivars in the major peanut-producing areas in the United States, the Uniform Peanut Performance Test (UPPT) was established through an informal agreement among collaborating scientists (table 1) and coordinated by USDA's Agricultural Research Service. The UPPT serves as a valuable breeding tool for measuring the adaptability of experimental lines compared to check cultivars over a wide range of growing conditions. The results provide the cooperators as well as peanut growers with information on the performance of existing and potential cultivars in Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia.

Each year since 1972, the UPPT has been conducted by experienced personnel using sound experimental designs. Each cooperator has the option of selecting plot size, seeding rate, cultural practices, and harvesting practices that are commonly used in peanut-breeding investigations at his or her participating station. Specific cultural practices are summarized by test location.

After preliminary evaluation for at least 2 years in local tests, breeders may propose peanut lines for these regional trials. New entries should equal the local check cultivar of a similar market type in most respects and should be superior to it in one or more characteristics. Cooperators may also include additional entries in the UPPT at the test location under their supervision. A new entry is accepted for a maximum of 3 years unless continuance or discontinuance is requested by a breeder or cooperator.

MATERIALS AND METHODS

The 1991 entry list for the UPPT's (local options not included) is shown in table 2.

Because of continued restrictions in some states on shipping and receiving seed, due to the presence of peanut stripe virus, participants in Stephenville, TX, were able to test entries only after seed increase in the greenhouse. Cooperators in Headland, AL, dropped out of the UPPT. Workers at the other locations were able to participate in a national test despite the onset of peanut stripe virus.

No Spanish- or Valencia-type entries were submitted for testing in 1991, so a national Spanish-Valencia-type test was not conducted. However, data are reported for 10 Spanish-Valencia-type cultivars for one location (Tifton, GA). Five Virginia-type entries (VNC 851, VA 910212, OK LSB–2, VA 861101, and VA 861120), the Florigiant and NC 7 checks, six Runner-type entries (GA T–2842, GA T–2741, UF 79308–3, UF 85112, UF 1028, and OK 89834), and the Florunner check were tested at eight locations (Suffolk, VA; Lewiston, NC; Tifton, GA; Gainesville and Marianna, FL; College Station and Stephenville, TX; and Fort Cobb, OK). Some entries were not tested at Stephenville, TX, due to the lack of seed that could be guaranteed to be free of stripe virus.

Yields are expressed in pounds per acre. Mean separations were based on the Waller-Duncan multiple range test. Values within the same column followed by the same letter are not significantly different at the 5% probability level.

Grade quality factors were determined according to federal-state inspection service standards. See page 2 for definition of all data terms. Minimum SMK (sound mature kernel) screen sizes are 15/64 by 3/4 inch for Spanish and Valencia types, 15/64 by 1 inch for Virginia types, and 16/64 by 3/4 inch for Runner types. The agronomic and cultural practices for 1991 varied with location (tables 3–5). The diversity among locations for these variables limits the comparison of entries to individual tests.

RESULTS

Yield and grade results for Virginia-Runner-type peanuts from eight locations are presented in tables 6–13.

Definition of Data Terms

The following definitions of data terms are used with tables 6–14:

DK — Damaged kernels

g/100 Seed — Weight in grams per 100 sound mature seeds

OK — Other kernel

% DK — Percentage of DK's that ride the minimum screen size for SMK's and defective splits

% ELK — Percentage of extra large kernels that ride a screen 21.5/64 by 1 inch

% Fancy — Percentage of in-shell peanuts that ride the 34/64-inch spacing set on the presizer

% Meat — Percentage of all kernels in the shelling sample, including SMK's, SS's, OK's, and DK's

% OK — Percentage of OK's that pass through the minimum screen size for SMK's

% TSMK — Percentage of total sound mature kernels equal to the percent summation of SMK's and SS's

SMK — Sound mature kernel

SS — Sound split

For peanut lines in table 6, contributing author T.A. Coffelt reported that entries were planted at normal planting dates with good stands except for OK LSB–2 and VA 910212. Sclerotinia blight was present throughout the test. Warmer-than-normal temperatures, especially in May and July, contributed to an earlier-than-normal digging date.

For peanut lines in table 8, contributing author W.D. Branch stated that good stands were obtained on all entries, except for GA T–2741, which was relatively thin. However, by midseason, excellent canopy growth and development were noted throughout the test. Differential harvest dates were as follows: August 20 = Marc I and UF 79308–3; September 3 = NC 7, UF 85112, VA 910212, OK LSB–2, and GA T–2842; September 16 = Florunner, Florigiant, and OK 89834; and September 26 = GA T–2741. Some white mold was again noted but at a low incidence. Very little tomato spotted wilt virus (TSWV) was detected in 1991, and then on only an occasional end plant.

For peanut lines in table 9, contributing author D.A. Knauft observed that yields were lower than expected because of heavy white mold pressure due to a wet early summer. This pressure also forced somewhat earlier digging, which particularly affected UF 81206Z6.

For peanut lines in table 10, contributing author D.W. Gorbet reported that excessive early rain caused stand problems, especially in Rep I, on which data were not collected. The early rain also contributed to a buildup of late leafspot later in the season. There were three digging dates, as different entries reached maturity (entries Marc I, UF 85112, UF 82107, UF 86107, UF 79308–3, and OK LSB–2 were dug at 126 days; entry UF 81206Z6 was dug at 159 days; and all other entries were dug at 136 days). Several entries had weak stands (UF 1027, GA T–2741, and especially VA 910212).

For peanut lines in table 11, contributing author O.D. Smith stated that pod disease (predominantly white mold and possibly some pythium) caused considerable pod shed, especially in large pod entries. In visual comparison of pod disease, GA T–2842 and GA T–2741 had less pod disease than did Florunner. Florigiant, NC 7, UF 85112, VNC 851, VA 910212, VA 861120, OK LSB–2, AgraTech VC–1, NC–V 11, and VA 861101 had more disease than did Florunner. Remaining entries were equal to Florunner in disease incidence.

For peanut lines in table 12, contributing author C.E. Simpson observed that leafspot probably did not affect

yield, but Bravo was applied eight times and many spots were still seen. Sclerotinia infection was noted on September 4, so Rovral was applied. Extremely cool and wet conditions from mid-August to frost (October 31) slowed maturity. None of the entries checked out "mature" at freeze kill; however, yields were not low. A delayed freeze would probably have allowed more than one harvest date. This was the second wettest growing season on record.

For peanut lines in table 13, contributing author J.S. Kirby reported that a hard freeze on November 1 resulted in freeze damage to Rep I of Florigiant.

Yield and grade results from the Tifton, GA, location for the Spanish-Valencia-type entries are presented in table 14.

For peanut lines in table 14, contributing author W.D. Branch stated that white mold and early leafspot were the major disease problems, but neither was considered severe. Again, only an occasional TSWV plant was observed at the end of the plots. In general, TSWV has been progressively less and less noticeable for the past 2 years (1990-91). Excessive rainfall was recorded during the early part of the growing season (season total was 26.90 inches). However, irrigation was still needed for this year's test (season total was 1.90 inches). Individual entries were dug on the following harvest dates: August 14 = Starr, Tamnut 74, Pronto, Tamspan 90, Spanco, N.M. Val. A, N.M. Val. C, Val. McRan, and Georgia Red; and August 29 = Toalson. Planting date, seeding rate, plot size, soil type, soil analyses, mineral amendments, and pesticides were the same as those in the Virginia-Runner test.

In addition to grade-quality factors, cooperator D.A. Knauft provided data on fatty-acid composition for entries grown at Gainesville, FL. These data are summarized in tables 15 and 16.

Mean yields by location and production area are presented in table 17.

Table 1. Cooperating agencies and personnel for Uniform Peanut Performance Tests in 1991

Code	Location	Cooperator
10	USDA–ARS Tidewater Agricultural Experiment Station Suffolk, VA 23437	T.A. Coffelt
20	Department of Crop Science North Carolina State University Raleigh, NC 27650	T.G. Isleib
30	Coastal Plain Experiment Station University of Georgia Tifton, GA 31793	W.D. Branch
40	Agronomy Department University of Florida Gainesville, FL 32611	D.A. Knauft
50	Agricultural Research and Education Center Marianna, FL 32446	D.W. Gorbet
60	Department of Soil and Crop Sciences Texas A&M University College Station, TX 77843	O.D. Smith
70	Research and Extension Center Texas Agricultural Experiment Station Stephenville, TX 76401	C.E. Simpson
80	Agronomy Department Oklahoma State University Stillwater, OK 74078	J.S. Kirby

Table 2. Cultivars and experimental lines, market type, and originating breeder(s) for Uniform Peanut Performance Tests in 1991

Entry	Type of peanut	Originating breeder(s)
Florigiant	Va*	W.A. Carver
NC 7	Va	J.C. Wynne, R.W. Mozingo
Florunner	Ru †	A.J. Norden, W.A. Carver, R.W. Lipscomb
GA T–2741 ‡	Ru	W.D. Branch
GA T–2842 ‡	Ru	W.D. Branch
OK 89834 ‡	Ru	J.S. Kirby
UF 1028 ‡	Ru	D.A. Knauft, D.W. Gorbet
OK LSB–2 ‡	Va	J.S. Kirby
UF 79308–3 ‡	Ru	D.W. Gorbet, D.A. Knauft
UF 85112 ‡	Ru	D.W. Gorbet, D.A. Knauft
VNC 851 ‡	Va	R.W. Mozingo, T.A. Coffelt, J.C. Wynne
VA 910212 ‡	Va	T.A. Coffelt, R.W. Mozingo
VA 861101 ‡	Va	T.A. Coffelt, R.W. Mozingo
VA 861120 ‡	Va	T.A. Coffelt, R.W. Mozingo

* Va = Virginia.
† Ru = Runner.
‡ Experimental line, unreleased at time of testing

Table 3. Summary of planting, harvesting, and soil type from test locations participating in Uniform Peanut Performance Tests in 1991

Location code	Type	Date planted	Date dug	Replications	Seed rate (seed/ft)	Harvest row spacing (inch)	Plot size (ft^2)	Soil type *
10	VA–RU	5–6	9–24	4	2.7	36	120	Suffolk fsl
20	VA–RU	5–8	9–30	4	1.2	36	144	Norfolk sl
30	VA–RU	4–17	8–20, 9–3, 9–16, 9–26	6	5.0	32+40	120	Tifton ls
40	VA–RU	5–6	9–5, 9–16	4	3.8	36	120	
50	VA–RU	5–31	10–4, 10–14, 11–6	3	4.0	36	120	Dothan ls
60	VA–RU	5–22	10–18	6	5.0	36	90	Padina sl
70	VA–RU	5–24	11–12	6	4.7	36	90	Windthorst fsl
80	VA–RU	6–10	10–10	6	5.0	36	96	Cobb fsl

* fsl = fine sandy loam, sl = sandy loam, ls = loamy sand.

Table 4. Summary of soil analyses and mineral amendments from test locations participating in Uniform Peanut Performance Tests in 1991

Location code	Soil analyses					Fertilizer (lb/acre)	Gypsum (lb/acre)	Lime (lb/acre)	Boron (lb/acre)
	pH	P_2O_5 (lb/acre)	K_2O (lb/acre)	Ca (lb/acre)	Mg (lb/acre)				
10	5.6	27	95	274	20	0	800	2,000	0.5
20	— *	—	—	—	—	0	970	0	0.5
30	5.8	53	135	482	60	500 (3–9–18)	1,300	0	0.5
40	—	—	—	—	—	440 (0–10–20)	700	0	0
50	6.1	77	79	834	82	400 (0–10–20)	1,200	0	0.5
60	7.8	8	67	458	41	250 (8–12–16)	1,080	0	0
70	7.3	6	266	1,668	338	300 (12–12–12)	0	0	0
80	6.7	64	332	—	—	120 (18–46–0)	0	0	0

* Data not available

Table 5. Summary of rainfall, irrigation, and pesticides from test locations participating in Uniform Peanut Performance Tests in 1991

Location code	Rainfall * (inch)	Irrigation (inch)	Pesticide		
			Herbicide	Fungicide	Other
10	18.49	0.0	Vernam, Balan, Lasso, Dual	Bravo, Rovral, Vapam	Lorsban, Asana, Nemacur, Temik, Orthene
20	29.43	1.8	Vernam, Balan, Dual, Basagran, Butyrac	Duter, Bravo, Vapam, Terraclor	Temik, Lorsban, Orthene, Lannate, Pydrin
30	27.21	3.9	Balan, Vernam, Lasso	Bravo, Terraclor	Temik, Lannate, Orthene
40	26.30	0.0	Balan, Dual, Basagran, Gramoxone	Bravo + sulfur	Orthene, Asana, Safer Soap
50	20.37	0.0	Sonolan, Vernam, Dual, Basagran, Starfire	Bravo	Orthene, Disyston, Asana
60	19.94	6.73	Pursuit, Treflan, Poast, Basagran	Bravo, Terraclor	Avid
70	23.70	7.25	Treflan, Dual, Poast	Bravo, Rovral	
80	13.42	24.00	Dual, Sonalan, Vernam	Bravo, Rovral, Dithane, Topsin	Orthene, Furadan, Lorsban, Comite

* Rainfall is maximum amount during growing season for locations with multiple digging dates. Early digging dates generally show less rainfall and irrigation.

Table 6. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Suffolk, VA, (code 10) in 1991 (nonirrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	4,011 a *	74.3	69.5	2.3	0.8	72.6	29.8	85.9
Florunner	4,320 ab	4.0	74.5	3.8	0.8	79.1	16.3	59.0
NC 7	4,583 ab	86.8	74.3	1.5	0.8	76.6	58.3	100.0
UF 1028	4,184 b	5.5	73.5	3.5	0.5	77.5	14.0	57.8
UF 79308–3	4,111 b	6.5	75.5	3.5	0.0	79.0	19.5	61.9
UF 85112	4,211 ab	12.8	74.5	2.8	0.5	77.8	14.3	67.4
GA T–2741	4,238 ab	0.8	72.3	5.0	0.0	77.3	0.5	40.4
GA T–2842	4,565 ab	2.8	72.3	3.3	0.5	76.1	15.5	53.6
OK 89834	4,456 ab	3.3	76.5	3.5	0.8	80.8	15.5	56.7
OK LSB–2	4,565 ab	72.5	73.0	1.8	1.0	75.8	42.5	91.8
VNC 851	4,356 ab	65.5	74.3	1.3	0.5	76.1	40.5	90.8
VA 910212	4,456 ab	72.3	70.5	2.5	0.8	73.8	42.5	86.4
VA 861101	4,855 a	73.5	73.0	1.5	0.3	74.8	44.5	82.2
VA 861120	4,329 ab	72.5	72.5	2.0	0.8	75.3	46.0	84.2

* Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 7. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Lewiston, NC, (code 20) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	5,006 ab *	69.8	73.5	2.6	— †	76.1	28.7	87.0
Florunner	4,931 ab	7.7	71.8	1.4	—	73.2	11.7	57.0
NC 7	6,141 a	71.3	72.2	1.0	—	73.2	33.9	83.0
UF 1028	4,991 ab	18.4	72.7	1.1	—	73.8	14.4	60.0
UF 79308–3	5,430 ab	19.5	75.5	2.0	—	77.5	19.5	66.0
UF 85112	4,870 ab	13.4	74.6	1.0	—	75.6	11.6	66.0
GA T–2741	5,233 ab	1.3	66.9	1.1	—	68.0	1.3	44.0
GA T–2842	5,445 ab	4.4	73.7	1.6	—	75.3	10.2	52.0
OK 89834	5,649 a	4.2	73.9	0.9	—	75.8	13.3	57.0
OK LSB–2	4,379 ab	75.9	74.3	1.4	—	75.7	45.9	82.0
VNC 851	4,492 ab	61.6	73.9	0.9	—	74.8	39.6	87.0
VA 910212	3,842 b	70.6	70.6	1.5	—	72.1	38.6	84.0
VA 861101	4,560 ab	72.3	71.7	2.0	—	73.7	42.6	88.0
VA 861120	5,369 ab	71.6	72.8	1.0	—	73.8	46.0	85.0

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 8. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Tifton, GA, (code 30) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	3,090 g *	76.0	73.0	1.2	2.0	76.2	36.6	85.8
Florunner	3,629 f	1.9	78.7	2.5	1.3	82.5	16.3	56.3
NC 7	4,861 c	86.0	73.8	0.8	2.2	76.8	55.0	98.1
UF 1028	4,357 de	2.6	75.4	2.0	2.2	79.6	11.1	53.6
UF 79308–3	4,159 e	4.0	69.0	6.9	0.9	76.8	13.5	56.0
UF 85112	5,417 b	10.1	71.2	2.7	3.2	77.1	13.8	63.8
GA T–2741	5,868 a	0.0	77.8	3.7	0.2	81.7	1.0	37.1
GA T–2842	5,032 bc	1.0	70.8	4.3	2.5	77.6	7.7	49.2
OK 89834	3,603 f	0.8	76.6	3.0	2.0	81.6	12.2	55.3
OK LSB–2	4,671 cd	83.5	72.8	0.7	2.7	76.2	51.1	99.4
VNC 851	— †	—	—	—	—	—	—	—
VA 910212	4,629 cd	71.1	67.8	1.6	3.9	73.3	38.1	85.2
VA 861101	—	—	—	—	—	—	—	—
VA 861120	—	—	—	—	—	—	—	—
Local option								
Marc I	3,996 ef	2.6	67.9	8.6	0.9	77.4	11.2	50.8

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 9. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Gainesville, FL, (code 40) in 1991 (nonirrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	3,240 ij *	85.5	69.5	2.1	2.0	73.6	29.8	85.1
Florunner	3,086 j	14.3	74.6	3.6	0.5	78.7	19.0	53.7
NC 7	— †	—	—	—	—	—	—	—
UF 1028	3,957 cde	16.1	74.1	2.8	0.6	77.6	23.5	57.2
UF 79308–3	4,556 a	21.6	70.3	4.9	0.6	75.8	21.0	64.5
UF 85112	3,984 bcde	13.4	73.7	4.1	0.7	78.4	23.5	62.6
GA T–2741	4,229 abc	0.0	74.0	4.9	0.5	79.4	2.3	40.2
GA T–2842	4,365 ab	7.3	72.5	3.2	1.2	77.4	17.9	55.3
OK 89834	3,240 ij	7.3	75.4	3.7	0.3	79.4	16.3	54.5
OK LSB–2	2,360 k	81.8	69.6	2.0	4.1	75.6	43.8	83.9
VNC 851	3,675 efgh	84.8	72.9	1.7	1.5	76.2	45.8	93.5
VA 910212	3,312 hij	84.9	69.4	2.3	1.6	73.4	40.7	83.9
VA 861101	3,539 fghi	87.4	68.9	1.9	2.3	72.8	41.4	81.1
VA 861120	3,739 defg	88.7	72.3	1.4	1.2	74.9	52.9	88.8
Local options								
Marc I	3,839 cdef	3.2	66.7	8.3	0.4	75.3	10.0	51.4
UF 82107	3,512 fghi	84.6	69.1	2.1	1.3	72.4	37.8	77.9
UF 86107	4,165 abc	15.5	70.2	4.9	1.0	76.1	19.6	60.2
UF 1025	4,374 ab	93.5	72.3	1.6	1.7	75.5	55.5	103.7
UF 1036	4,011 bcde	67.5	73.0	2.1	1.3	76.3	38.3	78.9
UF 1037	4,102 bcd	7.3	67.5	2.9	2.8	73.3	10.6	58.0
UF 81206Z6	3,412 ghij	53.3	66.1	2.9	0.1	69.4	38.5	63.8

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 10. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Marianna, FL, (code 50) in 1991 (nonirrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	4,386 cdef *	73.5	77.2	0.2	0.0	77.4	33.9	89.7
Florunner	4,302 cdefg	2.2	81.1	1.3	0.0	82.4	14.7	59.8
NC 7	— †	—	—	—	—	—	—	—
UF 1028	4,538 abcde	4.4	79.7	0.7	0.0	80.4	13.9	61.5
UF 79308–3	4,882 ab	3.4	80.1	1.0	0.0	81.1	17.1	62.7
UF 85112	4,453 bcdef	4.6	77.2	2.3	0.0	79.4	8.1	63.4
GA T–2741	4,695 abc	0.0	77.7	2.4	0.0	80.1	1.3	40.5
GA T–2842	3,914 gh	1.3	78.0	2.3	0.0	80.2	13.3	54.9
OK 89834	4,181 efg	1.6	81.8	0.8	0.0	82.6	14.5	59.8
OK LSB–2	3,285 i	70.2	77.9	0.4	0.0	78.2	38.3	94.2
VNC 851	4,066 fg	58.5	78.0	0.4	0.0	78.4	45.8	100.5
VA 910212	3,297 i	63.1	74.5	1.0	0.0	75.5	33.7	83.6
VA 861101	4,653 abcd	56.6	78.2	0.1	0.0	78.3	48.1	90.2
VA 861120	4,380 cdef	71.3	76.7	0.6	0.0	77.2	48.9	87.6
Local options								
Marc I	4,586 abcde	0.3	79.0	1.6	0.0	80.6	9.9	57.3
UF 82107	4,640 abcd	59.8	75.9	0.4	0.0	76.4	27.8	83.7
UF 86107	4,592 abcde	3.1	76.2	3.0	0.0	79.2	7.5	63.9
UF 1025	3,491 hi	88.2	76.9	0.7	0.0	77.6	50.8	104.7
UF 1036	4,217 defg	67.3	78.8	0.3	0.0	79.1	45.5	88.2
UF 1037	4,302 cdefg	0.7	73.9	1.4	0.0	75.3	7.7	57.8
UF 81206Z6	4,912 a	21.0	76.0	0.1	0.0	76.2	43.1	77.1

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 11. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at College Station, TX, (code 60) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	4,227 g *	— †	62.7	3.5	3.3	69.4	40.2	88.2
Florunner	5,407 abc	—	71.1	5.4	2.6	79.0	0.0	58.0
NC 7	4,587 efg	—	64.0	1.9	6.9	72.8	52.2	103.7
UF 1028	5,624 ab	—	70.5	3.6	3.7	77.8	0.0	61.3
UF 79308-3	5,978 a	—	73.8	3.5	2.3	79.6	0.0	63.0
UF 85112	5,306 bcd	—	71.4	2.8	2.9	77.1	0.0	70.1
GA T–2741	5,457 abc	—	74.9	3.8	0.7	79.5	0.0	40.7
GA T–2842	5,953 a	—	70.4	4.5	2.0	77.0	0.0	54.7
OK 89834	5,095 bcde	—	71.8	3.8	3.4	79.0	0.0	58.0
OK LSB–2	4,502 efg	—	62.3	2.6	6.2	71.1	42.4	94.8
VNC 851	4,661 efg	—	63.6	2.3	7.2	73.1	46.1	104.1
VA 910212	4,416 fg	—	57.2	4.2	5.1	66.4	31.9	81.4
VA 861101	4,424 fg	—	54.8	3.6	5.7	64.1	34.3	79.3
VA 861120	4,349 g	—	54.6	3.0	4.7	62.2	34.5	79.9
Local options								
Georgia Runner	4,981 cdef	—	71.9	4.4	3.6	79.9	0.0	59.1
AgraTech VC–1	4,800 defg	—	65.1	3.0	4.6	72.7	41.1	81.4
NC–V 11	4,581 efg	—	61.4	3.9	5.8	71.0	38.1	84.7

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 12. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Stephenville, TX, (code 70) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	4,296 g *	— †	61.9	5.1	3.2	70.2	21.2	72.5
Florunner	5,297 ab	—	75.8	3.7	0.6	80.1	—	60.4
NC 7	—	—	—	—	—	—	—	—
UF 1028	4,766 def	—	70.5	4.8	0.9	76.2	—	55.3
UF 79308–3	4,995 bcdef	—	70.6	3.6	2.0	76.2	—	69.0
UF 85112	—	—	—	—	—	—	—	—
GA T–2741	4,638 fg	—	73.1	4.0	0.8	77.9	—	42.4
GA T–2842	—	—	—	—	—	—	—	—
OK 89834	5,430 a	—	73.9	5.0	1.2	80.1	—	59.8
OK LSB–2	—	—	—	—	—	—	—	—
VNC 851	—	—	—	—	—	—	—	—
VA 910212	4,679 ef	—	62.1	4.4	1.9	68.4	24.6	80.8
VA 861101	—	—	—	—	—	—	—	—
VA 861120	—	—	—	—	—	—	—	—
Local options								
GK–7	4,914 cdef	—	75.6	3.3	0.8	79.7	—	62.8
NC–V 11	4,975 bcdef	—	68.9	3.2	1.2	73.3	30.0	76.8
Okrun	5,233 abc	—	75.4	4.0	1.2	80.6	—	61.1
AgraTech 127	4,667 ef	—	72.9	3.5	1.0	77.4	—	70.8
Marc I	5,049 bcd	—	74.2	3.4	1.1	78.7	—	61.6
Tamrun 88	5,064 bcd	—	75.8	4.4	0.4	80.6	—	57.0
Georgia Runner	5,011 bcde	—	74.4	4.0	1.0	79.4	—	59.8

* Values within same column followed by same letter are not significantly different at the 5% probability level.
† Data not reported

Table 13. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Fort Cobb, OK, (code 80) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Florigiant	3,093 de *	57.1	57.3	1.0	5.7	64.0	55.9	86.8
Florunner	3,100 de	1.6	77.3	1.7	0.3	79.3	24.6	60.2
NC 7	3,100 de	75.5	72.3	0.3	0.0	72.6	87.9	104.5
UF 1028	3,259 cde	4.2	75.7	1.3	0.0	77.0	34.6	63.4
UF 79308–3	3,335 cd	7.4	74.0	1.3	1.0	76.3	23.5	65.0
UF 85112	3,479 bcd	5.8	73.3	1.3	0.0	74.6	18.9	65.2
GA T–2741	2,889 e	0.6	79.0	0.3	0.0	79.3	16.3	49.3
GA T–2842	3,290 cde	1.3	74.0	1.0	1.0	76.0	22.4	56.7
OK 89834	3,615 abc	6.5	80.3	0.0	0.3	80.6	37.1	65.2
OK LSB–2	3,842 ab	72.8	70.3	0.0	0.3	70.6	61.3	93.4
VNC 851	3,622 abc	56.6	71.3	0.0	0.3	71.6	62.3	92.1
VA 910212	3,675 abc	73.3	68.3	0.0	0.0	68.3	52.5	89.0
VA 861101	3,940 a	70.0	70.0	0.0	0.0	70.0	61.5	85.8
VA 861120	3,585 abc	74.0	69.0	0.0	0.0	69.0	54.7	85.3

* Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 14. Yield and grade characteristics of Spanish-Valencia-type peanut lines grown at Tifton, GA, (code 30) in 1991 (irrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% ELK	g/100 Seed
Tamspan 90	3,321 a *	0.7	63.9	9.0	2.3	75.2	1.9	35.6
Toalson	3,083 ab	0.0	66.7	6.1	0.8	73.6	1.6	37.2
Pronto	3,064 ab	0.0	65.7	9.2	1.7	76.6	2.0	41.0
Tamnut 74	2,938 abc	0.0	67.1	8.5	0.4	76.0	1.2	34.6
Starr	2,863 bc	0.0	62.2	13.2	0.9	76.3	0.3	33.0
Spanco	2,846 bc	0.0	62.2	8.2	6.1	76.5	1.8	39.4
Georgia Red	2,564 c	26.7	64.2	4.9	4.6	73.7	9.1	48.8
N.M. Val. C	2,064 d	7.6	57.3	9.7	5.7	72.7	0.3	37.2
N.M. Val. A	1,941 d	7.4	58.9	10.8	2.8	72.5	0.5	37.0
Val. McRan	1,810 d	4.5	58.2	11.5	2.3	72.0	0.8	38.0

* Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 15. Fatty acid composition of UPPT entries grown at Gainesville, FL, in 1991 *

	Fatty acid composition (% of total) †							
Entry	16:0	18:0	18:1	18:2	20:0	20:1	22:0	24:0
Marc I	8.84	2.59	60.95	20.76	1.33	1.31	2.68	1.56
UF 85112	9.24	2.55	59.74	21.32	1.31	1.39	2.85	1.62
UF 82107	10.35	2.36	51.91	28.59	1.20	1.28	2.73	1.58
UF 86107	9.26	2.76	56.97	24.41	1.31	1.21	2.57	1.52
UF 1025	10.99	3.27	47.54	31.99	1.41	0.90	2.52	1.37
UF 79308–3	9.42	2.78	56.51	24.82	1.30	1.18	2.51	1.50
Florunner	9.45	2.60	55.59	25.11	1.32	1.33	2.84	1.77
Florigiant	8.72	4.23	59.00	20.62	1.83	1.06	2.88	1.67
UF 1036	11.41	2.81	43.65	35.13	1.34	1.05	2.97	1.63
UF 1037	8.42	2.86	59.29	22.33	1.41	1.30	2.89	1.52
UF 81206Z6	7.11	3.80	68.91	12.21	1.73	1.31	3.45	1.49
VNC 851	9.03	3.67	57.76	22.55	1.66	1.08	2.86	1.40
GA T–2741	8.47	3.22	60.43	19.94	1.63	1.29	3.36	1.68
GA T–2842	9.82	2.85	54.60	25.90	1.38	1.18	2.70	1.56
OK 89834	9.51	2.61	56.29	24.40	1.32	1.31	2.84	1.71
VA 910212	8.52	3.55	61.39	19.76	1.54	1.17	2.53	1.52
VA 861101	9.13	2.96	60.83	20.17	1.40	1.26	2.69	1.56
VA 861120	9.07	3.04	61.58	19.74	1.39	1.19	2.55	1.45
OK LSB–2	10.06	3.14	55.53	24.74	1.39	1.15	2.50	1.49
UF 1028	9.39	2.43	54.92	25.91	1.31	1.40	2.97	1.66

* Courtesy of cooperator D.A. Knauft
† Fatty acids for the 8 columns are palmitic, stearic, oleic, linoleic, arachidic, eicosanoic, behenic, and lignoceric, respectively.

Table 16. Iodine value, O/L ratio, percent total saturated fatty acids, P/S ratio, and percent total long-chain saturated fatty acids of UPPT entries grown at Gainesville, FL, in 1991 *

Entry	Iodine value	O/L † Ratio	% Total saturated	P/S ‡ Ratio	% Total long chain
Marc I	89.41	2.94	17.00	1.22	5.57
UF 85112	89.40	2.80	17.57	1.21	5.78
UF 82107	95.17	1.82	18.22	1.57	5.51
UF 86107	92.23	2.33	17.42	1.40	5.40
UF 1025	97.00	1.49	19.56	1.64	5.30
UF 79308–3	92.52	2.28	17.51	1.42	5.31
Florunner	92.35	2.21	17.98	1.40	5.93
Florigiant	87.29	2.86	19.33	1.07	6.38
UF 1036	99.21	1.24	20.16	1.74	5.94
UF 1037	90.69	2.66	17.10	1.31	5.82
UF 81206Z6	81.45	5.64	17.58	0.69	6.67
VNC 851	89.58	2.56	18.62	1.21	5.92
GA T–2741	87.53	3.03	18.36	1.09	6.67
GA T–2842	92.75	2.11	18.31	1.41	5.64
OK 89834	91.70	2.31	17.99	1.37	5.87
VA 910212	87.94	3.11	17.66	1.12	5.59
VA 861101	88.24	3.02	17.74	1.14	5.65
VA 861120	88.09	3.12	17.50	1.13	5.39
OK LSB–2	91.51	2.24	18.58	1.33	5.38
UF 1028	93.21	2.12	17.76	1.46	5.94

* Courtesy of cooperator D.A. Knauft
† O/L ratio = oleic/linoleic.
‡ P/S ratio = polyunsaturated/saturated fatty acids.

Table 17. Mean yields (lb/acre) of entries by production area and by locations with common entries

Entry	VC*	SE†	SW‡	4 LOC§	6 LOC‖	7 LOC¶	8 LOC**
Florigiant	4,509	3,572	3,889	4,097	4,002	3,872	3,925
Florunner	4,626	3,672	4,601	4,440	4,191	4,111	4,259
NC 7	5,362	— ††	—	4,531	—	—	—
UF 1028	4,588	4,284	4,550	4,515	4,426	4,416	4,460
UF 79308–3	4,771	4,532	4,769	4,714	4,715	4,636	4,681
UF 85112	4,541	4,618	—	4,467	4,384	4,531	—
GA T–2741	4,736	4,931	4,328	4,454	4,457	4,658	4,656
GA T–2842	5,005	4,437	—	4,813	4,589	4,652	—
OK 89834	5,053	3,675	4,713	4,704	4,373	4,263	4,409
OK LSB–2	4,472	3,439	—	4,322	3,822	3,943	—
VNC 851	4,424	—	—	4,283	4,145	—	—
VA 910212	4,149	3,746	4,257	4,097	3,833	3,947	4,038
VA 861101	4,708	—	—	4,445	4,329	—	—
VA 861120	4,849	—	—	4,340	4,246	—	—

* VC = Suffolk, VA; and Lewiston, NC.
† SE = Tifton, GA; Gainesville, FL; and Marianna, FL.
‡ SW = College Station, TX; Stephenville, TX; and Fort Cobb, OK.
§ 4 LOC = Suffolk, VA; Lewiston, NC; College Station, TX; and Fort Cobb, OK.
‖ 6 LOC = 4 LOC + Gainesville and Marianna, FL.
¶ 7 LOC = 6 LOC + Tifton, GA.
** 8 LOC = 7 LOC + Stephenville, TX.
†† Data not available

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